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LISTING OF CLAIMS:

1. (Currently amended): A charge pump circuit comprising:
a voltage increasing stage, wherein the voltage increasing stage comprises at least one charge pump section;
a voltage decreasing stage in parallel with the voltage increasing stage, wherein the voltage decreasing stage comprises at least one charge pump section; and
a shared input to the voltage increasing and voltage decreasing stages,
wherein the charge pump section of the voltage increasing stage and the charge pump section of the voltage decreasing stage each comprises a first input switch and output switch in series connected together at a first junction node, and a second input switch connected between the input and a second junction node, a first charge pump capacitor connected between the first junction node and a first control line and a second charge pump capacitor connected between the second junction node and a second control line, wherein the second junction node provides control signals for the first input and output switches.
2. (Previously presented): A circuit as claimed in claim 1, wherein the voltage increasing stage increases an input voltage by an integer multiple of the difference between a low supply line voltage and a high supply line voltage and the voltage decreasing stage decreases the input voltage by the integer multiple of the difference between the low supply line voltage and the high supply line voltage.
3. (Canceled)

4. (Previously presented): A circuit as claimed in claim 1, wherein the voltage increasing stage comprises a plurality of charge pump sections, each increasing a corresponding input voltage by the difference between a low supply line voltage and a high supply line voltage.

5. (Canceled)

6. (Currently amended): A circuit as claimed in claim 4 1, wherein the voltage decreasing stage comprises a plurality of charge pump sections, each decreasing a corresponding input voltage by the difference between a low supply line voltage and a high supply line voltage.

7. (Currently amended): A circuit as claimed in claim 6 4, wherein the plurality of charge pump sections section of the voltage increasing stage and the plurality of the charge pump sections of the voltage decreasing stage each comprises ~~an~~ the first input switch and ~~an~~ output switch in series connected together at the first a junction node, and the first a charge pump capacitor connected between the first junction node and a the first control line.

8. (Canceled)

9. (Previously presented): A circuit as claimed in claim 1, wherein complementary signals are applied to the first and second control lines.

10. (Previously presented): A circuit as claimed in claim 1, wherein non-overlapping signals are applied to the first and second control lines.

11. (Canceled)

12. (Currently amended): A circuit as claimed in claim 7 4, wherein complementary signals are applied to the first and second control lines.

13. (Currently amended): A circuit as claimed in claim 7 4, wherein non-overlapping signals are applied to the first and second control lines.

14. (Currently amended): A circuit as claimed in claim 1, wherein the first input switch and output switch of the charge pump section of the voltage increasing stage and the second input switch of the charge pump section of the voltage decreasing stage are operated in complementary manner.

15. (Currently amended): A circuit as claimed in claim 1, wherein a one of the first and second charge pump capacitors capacitor of at least one charge pump section of the voltage increasing stage and one of the first and second charge pump capacitors capacitor of at least one charge pump section of the voltage decreasing stage are connected together.

16. (Previously presented): A circuit as claimed in claim 1, wherein the voltage increasing stage increases an input voltage by an integer multiple of the difference between a low

supply line voltage and a high supply line voltage, and the voltage decreasing stage decreases the input voltage by the integer multiple of the difference between the low supply line voltage and the high supply line voltage, and wherein a voltage is applied to the shared input between the low supply line voltage and the high supply line voltage.

17. (Previously presented): An electronic device including a circuit as claimed in claim 1.

18. (Previously presented): A device as claimed in claim 17, wherein the device comprises a liquid crystal display.

19. (Previously presented): A device as claimed in claim 18, wherein the circuit and a TFT switching array for the display are provided on a common substrate.

20. (Canceled)

21. (Currently amended) A charge pump circuit as claimed in claim 20, comprising:
a voltage increasing stage, wherein the voltage increasing stage comprises at least one charge pump section;

a voltage decreasing stage in parallel with the voltage increasing stage, wherein the voltage decreasing stage comprises at least one charge pump section; and
a shared input to the voltage increasing and voltage decreasing stages,

wherein the charge pump section of the voltage increasing stage and the charge pump section of the voltage decreasing stage each comprises an input switch and an output switch in

series connected together at a junction node, and a charge pump capacitor connected between the junction node and a control line, and wherein the voltage increasing stage increases an input voltage by an integer multiple of the difference between a low supply line voltage and a high supply line voltage and the voltage decreasing stage decreases the input voltage by the integer multiple of the difference between the a low supply line voltage and the high supply line voltage.

22. (Currently amended): A charge pump circuit as claimed in claim 20, comprising: a voltage increasing stage, wherein the voltage increasing stage comprises at least one charge pump section;

a voltage decreasing stage in parallel with the voltage increasing stage, wherein the voltage decreasing stage comprises at least one charge pump section; and a shared input to the voltage increasing and voltage decreasing stages,
wherein the charge pump section of the voltage increasing stage and the charge pump section of the voltage decreasing stage each comprises an input switch and an output switch in series connected together at a junction node, and a charge pump capacitor connected between the junction node and a control line, and wherein the voltage increasing stage comprises a plurality of charge pump sections, each increasing a corresponding input voltage by the difference between a low supply line voltage and a high supply line voltage.

23. (Currently amended): A charge pump circuit as claimed in claim 20, comprising: a voltage increasing stage, wherein the voltage increasing stage comprises at least one charge pump section;

a voltage decreasing stage in parallel with the voltage increasing stage, wherein the voltage decreasing stage comprises at least one charge pump section; and
a shared input to the voltage increasing and voltage decreasing stages,
wherein the charge pump section of the voltage increasing stage and the charge pump
section of the voltage decreasing stage each comprises an input switch and an output switch in
series connected together at a junction node, and a charge pump capacitor connected between the
junction node and a control line, and wherein the voltage decreasing stage comprises a plurality
of charge pump sections, each decreasing a corresponding input voltage by the difference
between a low supply line voltage and a high supply line voltage.

24. (Currently amended): A charge pump circuit comprising:

a voltage increasing stage, wherein the voltage increasing stage comprises comprise at
least one charge pump section;
a voltage decreasing stage in parallel with the voltage increasing stage, wherein the
voltage decreasing stage comprises at least one charge pump section; and
a shared input to the voltage increasing and voltage decreasing stages,
wherein the charge pump section of the voltage increasing stage and the charge pump
section of the voltage decreasing stage each comprises a first input switch and output switch in
series connected together at a first junction node, and a second input switch connected between
the input and a second junction node, a first charge pump capacitor connected between the first
junction node and a first control line and a second charge pump capacitor connected between the
second junction node and a second control line, and

wherein a one of the first and second charge pump capacitors ~~capacitor~~ of at least one charge pump section of the voltage increasing stage and a one of the first and second charge pump capacitor ~~capacitor~~ of at least one charge pump section of the voltage decreasing stage are connected together.